

## Abstract of the Invention

Methods are provided for assay and detection on a microarray. The method of the present invention comprises incubating a mixture including: i) a first component comprising a cDNA reagent obtained from mRNA of a target sample, the cDNA having a capture sequence, and ii) a second component comprising a dendrimer having at least one first arm containing a label capable of emitting a detectable signal and at least one second arm having a second nucleotide sequence complementary to the capture sequence, at a first temperature and for a time sufficient to induce the first component to bind to the second component and form a prehybridized cDNA-dendrimer complex; contacting a microarray having thereon a plurality of features each containing a particular first nucleotide sequence with the mixture; and incubating the microarray and the prehybridized cDNA-dendrimer complex at a second temperature and for a time sufficient to induce prehybridized cDNA-dendrimer complex to bind to the first nucleotide sequence, wherein such binding results in the feature emitting the detectable signal whereby a hybridization pattern is generated on the microarray.